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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, PHILLIP H	

ART UNIT	PAPER NUMBER
2191	

NOTIFICATION DATE	DELIVERY MODE
11/29/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/713,612	CANTRILL, BRYAN M.	
	Examiner	Art Unit	
	Phillip H. Nguyen	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,7,9-14,16-18 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7,9-14,16-18 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed 9/11/2007.

2. Claims 1-4, 7, 9-14, 16-18 and 20 remain pending and have been considered below.

Response to Amendment

3. Per Applicant's request, Claims 5, 6, 8, 15 and 19 have been canceled.

4. The rejection to claims 1-4, 7, 9-14, 16-18 and 20 is withdrawn in view of applicant's amendment.

Response to Arguments

5. Applicant's arguments with respect to claims 1-4, 7, 9-14, 16-18 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 7, 9-14, 16-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Owaki et al. (United States Patent No. 5,142,679).

As per claims 1 and 13:

Owaki teaches:

- obtaining data from an instrumented program using a probe (see at least col. 1, lines 56-63 "***a machine instruction (PROBE instruction) for detecting each boundary of a plurality of program blocks of the structured program is inserted at each block boundary, and a program for collecting the execution status data of the structured program is started by the PROBE instruction during a period of the execution of an object program and the collected execution status data is stored in a table***");
- associating the data with an enabled probe identification (see at least ***FIG. 11B***); and
- storing the data in the dataset (see at least ***FIG. 11B***),
    - wherein the enabled probe identification is stored in the enabled probe identification component and the data is stored in the associated data set component (see at least col. 6, lines 40-48 "***The block identification number BN in the PROBE instruction registered in the IR 9 and the program identification number PN in the PSW (registered in the flag register 5) are combined in the ALU 23. The combined information is stored in the interrupt control information store 7 as the program execution path history information (execution status data) PBN***"; also see at least ***FIG. 11B***), and

- wherein the enabled probe identification is associated with the metadata defining a layout of the data obtained using the probe (see at least (see at least ***FIG. 114*** – *This table contains all the execution status data (PBN), each of these PBN describe or define the layout of the PBN stored in FIG. 11B*).

As per claim 2:

Owaki further teaches:

- defining a tracing function wherein the tracing function comprising an action (see at least col. 1, line 45 "...***to provide a method and apparatus for collecting execution status data of a structured program***");
- associating the action with the enabled probe identification (see at least col. 6, lines 39-40 "***the execution status data collection operation is started by the PROBE instruction***"); and
- associating the probe with the enabled probe identification (see at least ***FIG. 11A***).

As per claims 3 and 14:

Owaki further teaches:

- wherein the tracing function is defined by a consumer (***The developer/programmer/user/consumer is defined the tracing function by adding PROBE instruction at the break point***).

As per claims 4 and 17:

Owaki further teaches:

- wherein the enabled probe identification is defined on a per-consumer basic (***PROBE instruction is inserted by per developer/programmer/user/consumer for collecting execution status data***).

As per claims 7, 12, 16 and 20:

Owaki further teaches:

- wherein the metadata includes at least one selected from the group consisting of an action name, a module name, a data size, a data type, and an action function (see at least ***FIG. 11B***).

As per claim 9:

Owaki futher teaches:

- wherein the data set is stored in a kernel-level buffer (see at least col. 6, lines 45-46 "***the combined information is stored in the interrupt control information store 7***).

As per claim 10:

Owaki futher teaches:

- copying the data set to a user level buffer, wherein the data set comprises an enabled probe identification and data (see at least col. 6, lines 40-48 "***The block identification number BN in the PROBE instruction registered in the IR 9 and the program identification number PN in the PSW (registered in the flag register 5) are combined in the ALU 23. The combined information is stored in the interrupt control information store 7 as the program execution path history information (execution status data) PBN***"; also see at least ***FIG. 11B***);
- obtaining the enabled probe identification from the data set (see at least col. 6, lines 58-61 "***The PBN stored in the interrupt control information store 7 by the execution of the PROBE instruction is stored into the program execution status data store table 8***"; also see at least ***FIG. 14***);
- obtaining metadata using the enabled probe identification (see at least col. 7, lines 1-4 "***a particular block of a particular program that has been executed can be determined***").; and
- processing the data set using the data and the metadata (see at least col. 7, lines 1-4 "***By analyzing the execution status data (execution path history data) thus collected, a particular block of a particular program that has been executed can be determined***").

As per claim 11:

Owaki futher teaches:

- wherein the metadata defines the layout of the data (see at least ***FIG. 114*** – *This table contains all the execution status data (PBN), each of these PBN describe or define the layout of the PBN stored in FIG. 11B*).

As per claim 18:

Owaki further teaches:

- a probe obtaining data from an instrumented program (see at least col. 1, lines 56-63 "***a machine instruction (PROBE instruction) for detecting each boundary of a plurality of program blocks of the structured program is inserted at each block boundary, and a program for collecting the execution status data of the structured program is started by the PROBE instruction during a period of the execution of an object program and the collected execution status data is stored in a table***");
- a tracing framework assigning an enabled probe identification to an action (see at least ***FIG. 11B***) and associating the probe with the enabled probe identification (see at least col. 4, lines 44-46 "***the PROBE instruction which contains the block identification number (BN) in the operand field is prepared based on the table***");
- a per-consumer buffer storing the data set, wherein the data is stored in the data component and the enabled probe identification in the enabled probe

identification component (see at least col. 6, lines 40-48 "***The block identification number BN in the PROBE instruction registered in the IR 9 and the program identification number PN in the PSW (registered in the flag register 5) are combined in the ALU 23. The combined information is stored in the interrupt control information store 7 as the program execution path history information (execution status data) PBN***"; also see at least ***FIG. 11B***); and

- an EPIP-Metadata table relating the enabled probe identification to metadata defining a layout of the data obtained by the probe (see at least ***FIG. 114*** – *This table contains all the execution status data (PBN), each of these PBN describe or define the layout of the PBN stored in FIG. 11B*),
- wherein the enabled probe identification is assigned to the action defined by the consumer associated with the per-consumer buffer (see at least ***FIG. 11B***).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Thursday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN
11/15/2007

WEI ZHEN
SUPERVISORY PATENT EXAMINER